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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,580

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WASHINGTON, DC 20005

EXAMINER

KOSLOW, CAROL M

ART UNIT

PAPER NUMBER

1755

MAIL DATE

DELIVERY MODE

08/06/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/540,580	Applicant(s) SENDA ET AL.	
	Examiner C. Melissa Koslow	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date: ____. | 6) <input type="checkbox"/> Other: ____.  |

The Japanese references cited in the information disclosure statement have been considered with respect to the supplied English abstracts, the explanation in the search report and/or the explanation in the specification.

The disclosure is objected to because of the following informalities: All occurrences of "alkali earth" should be changed to the more commonly used phrase "alkaline earth". The specification refers to "rubber-base bonded magnets" and "rubber-base binder", but it is unclear what is meant by this phrase. While page 6 gives examples as vulcanized rubbers and thermoplastics having rubber elasticity, it is unclear what other organic materials are included. For example, it is unclear if this phrase encompasses all elastomers, which are polymers having rubber elasticity, or not. It is unclear how the process reduces the content of chlorine in the powder. The only example starts with a ferrite containing 0.055 wt% chlorine and treats it with sulfuring acid which removes 0.045 wt% of the chlorine. There is no indication if any other mineral acid, which includes hydrochloric acid, would remove chlorine from the ferrite and there is no indication as to how to achieve the disclosed chlorine content when the ferrite contains more than 0.055 wt% chlorine. Finally, the phrase "neutralizing" conventionally means making the powder so that it has a neutral pH, which is about 7. It is clear from the specification that applicants actual do not mean "neutralizing" but treating with the acid so that the ferrite has a pH of less than 6 and a chlorine content of 0.05 wt% or less. Thus it appears the use of "neutralizing" is a mistranslation. Appropriate correction is required.

Claims 1-4 are objected to because of the following informalities: All occurrences of "alkali earth" should be changed to the more commonly used phrase "alkaline earth". Appropriate correction is required.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 2 and 4 refer to "rubber-base resin", but it is unclear what is meant by this phrase. While page 6 of the specification gives examples as vulcanized rubbers and thermoplastics having rubber elasticity, it is unclear what other organic materials are included. For example, it is unclear if this phrase encompasses all elastomers, which are polymers having rubber elasticity, or not. It is unclear how the process of claim 3 produces a powder having the claimed chlorine content since there does not appear to be any claimed step which will remove chlorine from the ferrite. In addition, the phrase "neutralizing" conventionally means making the powder so that it has a neutral pH, which is about 7. Finally, claim 3 refers to a "water-based medium". It is unclear what is meant by this. It is noted that the specification only teaches dispersing the annealed ferrite in water.

Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Subject matter that is critical or essential to the practice of the invention, but not included in the claim means the claim is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

The specification shows in the examples that the sulfuric acid concentration is critical to the process since it determines the pH of the powder. This apparent critical limitation is not found in the process of claim 3 and thus the claim is not enabled.

Claim 3 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for producing an alkaline earth ferrite having a chlorine content of 0.05 wt% or

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less and a pH of less than 6 by producing a calcined alkaline earth ferrite having a chlorine content of 0.055 wt%, pulverizing the calcined ferrite, annealing the pulverize ferrite, dispersing the annealed powder in a water, adding sulfuric acid so that the concentration of the acid is 0.1%, adding a dispersant thereto and recovering the powder by vacuum drying does not reasonably provide enablement for producing an alkaline earth ferrite having a chlorine content of 0.05 wt% or less and a pH of less than 6 by producing a calcined alkaline earth ferrite, where the chlorine content is not defined which means it has any chlorine content, pulverizing the calcined ferrite, annealing the pulverize ferrite, dispersing the annealed powder in a water, neutralizing the dispersion using a mineral acid, adding a dispersant thereto and recovering the powder by vacuum drying. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

While the specification generally discloses the claimed method there are no details except for the teachings in the examples. The examples show that the concentration of the acid in the dispersion is critical. The only acid used is sulfuric acid. There is a question if all mineral acids, which includes hydrochloric acids would remove chlorine from the ferrite as well as reduce the pH to less than 6 and there is a question as to the concentration of acid required to decrease the amount of chlorine to 0.05 wt% or less when the amount of chlorine is greater than 0.055 wt% while reducing the pH to less than 6.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by JP 04-182318.

The abstract for this reference teaches forming alkaline earth ferrite by calcining a precursor for the ferrite containing 100 ppm (0.01 wt%) or less of chlorine and table 2 in column 9 on page 99 teaches specific alkaline earth containing ferrite having a chlorine content of 0.01 wt%, 0.006 wt% and 0.008 wt%. The reference teaches the claimed powder.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 04-93002.

The abstract for this reference teaches treating a ferrite powder, used to produce bonded magnets, with a mineral acid until the pH of the powder is in the range of 2-6. Pages 12 and 13 teach the ferrite is a barium or strontium ferrite. Thus the reference teaches a powder of an alkaline earth containing ferrite with a mineral acid until the powder has a pH in the range of 2-6, which overlaps the claimed range. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). The reference is silent as to the chlorine content of the powder, but the taught process reads upon applicants' neutralization process of contacting the ferrite powder with a mineral acid until the pH is less than 6, which applicants state produces

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powder having a chlorine content of 0.05 wt% or less. Thus one of ordinary skill in the art would expect the taught process to also decrease the amount of chlorine to be 0.05 wt% or less, absent any showing to the contrary. The reference suggests the claimed powder.

Claim 4 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph and objections set forth in this Office action.

There is no suggestion or teaching in the cited art of record of a bonded magnet comprising a ferrite powder having a pH of less than 6 and a chlorine content of 0.05 wt% or less and a vulcanized rubber or a thermoplastic having rubber elasticity.

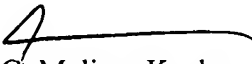
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk  
August 3, 2007

  
C. Melissa Koslow  
Primary Examiner  
Tech. Center 1700